Saskatchewan
Agriculture

Farm Business
Management

Farm Business Analysis, 1982
Hog Enterprise

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Preface

This publication deals with the financial and herd performance of Saskatchewan swine producers in 1982. The data is obtained from the actual financial and production records of farm operators. It is collected, analyzed and published on an annual basis.

The purpose of this program is threefold:

1. To obtain accurate, up-to-date data on the financial and physical performance of Saskatchewan hog producers;

2. To provide information that will enable producers to make better production and financial decisions; and

3. To assist extension workers, lending agencies and agri-business to obtain a better understanding of the financial requirements of Saskatchewan livestock enterprises.

This publication was prepared by Don Barber and Dean Dyck. The contributions of many people who assisted in compiling and reviewing this material are gratefully acknowledged. A special thank you is extended to the Saskatchewan farmers who allowed access to their records and provided the necessary supplementary information for the analysis.

Farm Business Management Section,
Saskatchewan Agriculture

Table of Contents

	Page
SWINE ENTERPRISE	
Introduction	1
General	1
Herd Performance	2
Table 1: Swine Herd Performance Report	2
Financial Performance	3
Table 2.1: Investment and Income For All Farrow to Finish and Weanling Enterprises	4
Table 2.2: Expenses All Farrow to Finish and Weanling Enterprises	5
Table 3.1 Investment and Income for Farrow to Finish Enterprise for 1979, 1980, 1981 and 1982	6
Table 3.2: Expenses for Farrow to Finish Enterprise for 1978, 1979, 1980, 1981 and 1982	7
Table 4.1: Investment and Income for Farrow to Finish Enterprise Classified by Size and Profitability	8
Table 4.2 Expenses for Farrow to Finish Hog Enterprise Classified by Size and Profitability	9
Table 5 Management Indicators for Farrow to Finish and Weanling Enterprises Classified by Enterprise and Profitability	10

FARM BUSINESS ANALYSIS - 1982
Swine Enterprises

Introduction

This study deals with the financial and herd performance of Saskatchewan swine producers in 1982. The information was obtained from the analysis of actual financial and production information gathered from 38 farms. The farms were categorized for analysis by type, size, and profitability. The analysis provides an average for capital investment, income and costs on per market hog or per weanling basis.

Care must be exercised in interpreting the income and cost statements in this report. While these averages are based on actual farm data it must be recognized that the sample is not a statistically drawn sample and thus the results should not be interpreted as a provincial average. The information in this publication does, however, provide a good guide to the costs and returns associated with swine enterprises.

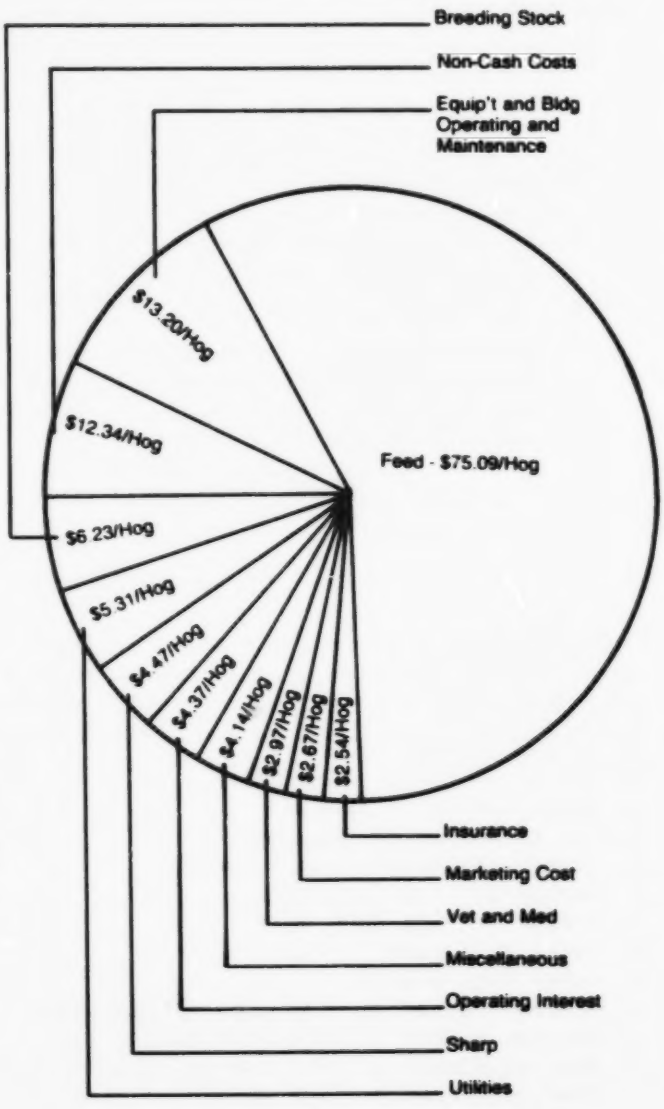
General

The total number of hogs marketed in Saskatchewan in 1976 was slightly over 530,000. Since then, marketings have increased steadily to a peak in 1980 of over 780,000 hogs. In 1981, the figure dropped to just over 650,000 marketings, and the income derived from swine enterprises accounted for 2.0% of the total farm income for Saskatchewan.

Farmers in this study received an average of $80.46 per cwt. with the average market weight of 165 pounds per market hog. Farmers producing weanlings received an average of $50.67 per weanling. Total income per market hog from all sources was $161.09 in 1982. This is 29% higher than what was received in 1981.

Costs, however, have also gone up. Costs have increased from $113.37 to $133.33 per market hog, which represents a 18% increase. Major components of the increase include feed, equipment maintenance and operating, SHARP premiums and non-cash costs. However, the increased income received in 1982 more than offset the increase in costs. Net farm income increased from $11.12 to $27.75 per market hog, representing a 150% increase.

Total Cost Per Market Hog $133.33



Herd Performance

The herd performance of the swine enterprises in 1982 was slightly lower than the previous three years.

The average number of pigs weaned per sow per year in 1982 was 12.9. In 1979 the average was 13.68, in 1980 was 13.43 and in 1981 it was 14.9. The decrease is largely due to a lower number of litters per sow. The average number of pigs born alive has consistently been near 9.5 per litter with 7.8 pigs per litter being weaned. Table 1 shows the average for all areas of the herd performance report for the past four years.

Method and Assumptions

The records of 38 farms were analyzed to provide the herd performance. The following methods and assumptions were used in compiling this report:

(a) The basic herd performance data comes from sow litter cards filled out by the producers for each litter which indicated farm and sow I.D. number, date and numbers farrowed, and date and numbers weaned (weanling weights are optional). This data is collected every three months along with the average number of sows and boars on inventory over the three-month period. The data is recorded and processed by computer. Reports are produced on a quarterly basis for each farmer and an annual report is produced for this publication.

(b) Both the basic data for the calculations and the results of several computations are shown on each herd performance report. Line numbers 1, 2, 3, 6, 7, 8 and 9 are the base statistics for ratios and percentages indicated on the other lines. For example: the number of sows per boar figure of 13.7 is simply the average number of sows, 68.7, divided by the average number of boars, 5.1.

The number of "litters per sow annual", for each quarter, indicates the number of litters each sow, quoted on inventory, would have had if the remaining three-quarters would have had the same number of litters; i.e. litters/sow in the quarter multiplied by four quarters in a year. The resultant average for all farms for the year was 1.7.

The most critical parameter used in budgeting is the "number weaned/sow/year". This is simply calculated by multiplying the "litters/sow" by the average number of pigs "weaned/litter". Table 1 indicates this to be 12.9 for all farms.

Table 1
Swine Herd Performance Report

	Average Per Farm			
	1979	1980	1981	1982
1. Average Number of Sows	58.16	68.29	72.00	68.7
2. Number of Litters Weaned	104.54	120.16	137.00	120.2
3. Number of Boars in Use	4.22	4.52	5.00	5.1
4. Averge Number of Sows/Boar	13.78	15.10	14.40	13.4
5. Number of Litters/Sow - Annual	1.80	1.76	1.90	1.7
6. Number of Pigs Born Alive	991.31	1,141.34	1,320.00	1,136.0
7. Number of Pigs Born Dead	101.11	115.41	131.00	117.0
8. Total Pigs Born	1,092.43	1,256.76	1,451.00	1,252.0
9. Total Pigs Weaned	783.02	917.13	1,072.00	937.0
10. Average Number of Pigs Born Alive/Litter	9.48	9.50	9.60	9.4
11. Average Number of Pigs Born Dead/Litter	.97	.96	1.0	1.0
12. Average Number of Pigs Weaned/Litter	7.49	7.63	7.8	7.7
13. Average Number of Pigs Weaned/Sow/Year	13.68	13.43	14.9	12.9
14. Average Age of Weanling (Days)	32.57	31.89	32.7	34.1

FINANCIAL PERFORMANCE

Method and Assumptions

Of the 38 farms which provided herd performance information, 24 farms also provided financial information. Of this number, 18 farrow to finish enterprises and 6 weanling enterprises provided records which were consistent and had a high degree of accuracy. The records of these farms were analyzed to provide average income, expenses and investment per market hog or per weanling. The following method and assumptions were used in compiling the following tables:

(a) All figures calculated on a per market hog or per weanling basis. To calculate the number of market hogs or weanlings represented by the income received from the sale of various sizes of hogs on each farm, the average value of a market hog or weanling was divided into the total value of feeder hogs and weanlings and market hogs. For example, if you had sold 538 finished hogs at an average value of $146, and had also sold some weanlings at a total value of $15,145 then the adjusted hog figure would be:
538 + (15,145 ÷ 146) = 641

(b) The 24 farms are the basis for all the following tables: Tables 2.1 and 2.2 give the investment, income and expenses for all farrow to finish and weanling operations. Tables 3.1 and 3.2 provide a comparison of farrow to finish operations over the last five years.

(c) The income is the actual farm income adjusted for the change in inventory of feed, supplies and livestock which is not breeding stock.

(d) Expenses - The expenses are the actual hog expenses for each farm minus all interest and labour payments. An allowance for interest on operating money has been calculated by taking one-quarter of the total cash expenses at a 15% interest rate. The 15% interest rate used is a blend between the interest rate charged for operating loans and the rate paid on savings accounts.

(e) Non-Cash Expenses - The non-cash expenses includes an allowance for depreciation on hog buildings and equipment and for farm machinery used in the hog enterprise. Hog buildings and equipment and farm machinery were depreciated at a rate of 5% and 15%, respectively, of their original cost.

(f) Net Cash Income - The net cash income is the difference between the total cash income and the total cash expenses. This amount represents the actual dollars that a farmer has to cover his living costs, debt payments, interest on loans, labour, and principle payments on loans incurred for capital purchases (the adjustment for inventory change is not included in the total cash income).

(g) Net Farm Income - Net farm income is the difference between the total income and the total cost of production. This amount represents a return to the operator's labour and management, and a return to the total investment in the farm.

Observations:

Table 4 and 4.2 provide a comparison of farms classified by size and profitability. The difference in net farm income for the different size categories is due mainly to the cost of feed as reflected in the change in inventory.

Table 2.1
Investment and Incomes for All Farrow to Finish
and Weanling Enterprises

	Farrow to Finish Enterprise	Weanling Enterprise
Number of Farms	18	6
Number of Sows Per Farm	60	67
Number of Market Hogs or Weanling Per Farm	651	864
Number of lbs. of Feed/Market Hog or Weanling	826	284
Investment	Per Market Hog	Per Weanling
Market Value of Buildings	$ 128.21	$ 35.82
Market Value of Machinery	37.32	25.25
Market Value of Livestock	22.33	16.36
Total Investment	$ 187.86	$ 77.43
Income		
Boar Sales	$ 3.05	$ .38
Sow Sales	10.34	6.65
Weanling or Feeder Hogs	11.18	40.67
Finished Hogs	132.76	11.11
SHARP Payment	5.88	2.17
Miscellaneous Income	1.39	.63
Inventory Change	-3.51	9.81
Total Income	$ 161.09	$ 71.42
Total Cash Income (Excluding Inventory Change)	$ 164.60	$ 61.61
Total Cash Expenses	$ 120.99	$ 45.85
Net Cash Income	$ 43.61	$ 15.76
Total Cost of Production (Including Depreciation)	$ 133.33	$ 52.01
Net Farm Income	$ 27.76	$ 19.47

Table 2.2
Expenses All Farrow to Finish and All Weanling Enterprises

	Farrow to Finish Enterprise	Weanling Enterprise	Projected % Increase In Cost of Various Inputs From 1982-83
Number of Farms	18	6	
Number of Sows Per Farm	60	68	
Number of Market Hogs or Weanling/Farm	651	864	
Number of lbs. of Feed/Market Hog or Weanling	826	284	
Cash Expenses	Per Market Hog	Per Weanling	
Boar Purchases	$ 1.10	$ .75	
Sow Purchases	1.69	1.62	
Feeder Hog Purchases	3.44	5.38	
Total Livestock Purchases	6.23	7.75	
Home Grown Feed Grain	1.86	2.55	
Purchased Feed Grain	4.47	1.08	
Complete Feed	60.62	17.90	
Supplement	8.14	2.01	
Total Feed Cost	75.09	23.54	+ 5%
Fuel and Lubricant	6.02	1.97	
Machinery R & M	5.85	1.42	
Total Machinery Cost	11.87	3.39	+12%
Vet & Medicine	2.97	1.47	
Insurance	2.54	.51	
Utilities, Taxes and Rentals	5.39	2.84	
Freight	1.94	.42	
SHARP Premiums	4.47	.22	
Marketing Cost	2.67	.33	
Building & Equipment R & M	1.33	1.41	even
Miscellaneous Costs	2.12	2.31	
Total Other Costs	23.43	9.51	
Operating Interest (15%)	4.37	1.66	-20%
Total Cash Expenses	$120.99	$ 45.85	little change
Net Cash Income	$ 43.61	$ 15.70	
Non-Cash Expenses			
Machinery Depreciation	$ 5.96	$ 4.00	
Building & Equipment Depreciation	5.38	2.10	
Total Non-Cash Expenses	$ 12.34	$ 6.10	+10%
Total Cost of Production	$ 133.33	$ 52.01	+8%
Net Farm Income	$ 27.76	$ 19.47	

Table 3.1
Investment and Income for Farrow to Finish Enterprise
for 1978, 1979, 1980, 1981 and 1982

	1978	1979	1980	1981	1982
Number of Farms	10	17	16	20	18
Number of Sows Per Farm	60	84	80	77	60
Number of Market Hogs Per Farm	881	1,019	1,003	1,000	651
Number of lbs. of Feed/Market Hog	893	732	731	789	826
Investment	Per Market Hog	Per Market Hog	Per Market Hog	Per Market Hog	Per Market Hog
Market Value of Buildings	$ 56.66	$ 79.39	$ 80.00	$ 70.80	$128.21
Market Value of Machinery	15.39	15.09	23.68	21.55	37.32
Market Value of Livestock	-	-	-	19.85	22.33
Total Investment	$ 72.05	$ 94.48	$103.68	$112.20	$187.86
Income					
Sow and Boar Sales	$ 2.40	$ 16.25	$ 11.77	$ 14.16	$ 13.39
Feeder & Weanling Hogs	5.62	8.92	7.02	13.97	11.18
Finished Hogs	83.93	67.39	69.20	84.79	132.76
SHARP Payment	-	-	4.21	6.77	5.88
Miscellaneous Income	$ 2.16	$ .36	1.91	3.77	1.39
Inventory Change	22.88	16.07	8.83	1.03	-3.51
Total Income	$116.99	$108.99	$102.94	$124.49	$161.09
Total Cash Income (Excluding Inventory Change)	$ 94.11	$ 92.92	$ 94.11	$123.46	$164.60
Total Cash Expense	$ 70.58	$ 79.42	$ 82.27	$106.21	$120.99
Net Cash Income	$ 23.53	$ 13.50	$ 11.84	$ 17.25	$ 43.61
Total Cost of Production (Including Depreciation)	$ 79.28	$ 90.29	$ 89.70	$113.37	$133.33
Net Farm Income	$ 37.71	$ 18.70	$ 13.24	$ 11.12	$ 27.76

Table 3.2
Expenses for Farrow to Finish Enterprise
for 1978, 1979, 1980, 1981 and 1982

	1978	1979	1980	1981	1982
Number of Farms	10	17	16	20	18
Number of Sows Per Farm	60	84	80	77	60
Number of Market Hogs Per Farm	881	1,019	1,003	1,000	651
Number of lbs. of Feed/Market Hog	893	732	731	789	826
Cash Costs	Per Market Hog	Per Market Hog	Per Market Hog	Per Market Hog	Per Market Hog
All Feed	$ 50.36	$ 56.28	$ 61.37	$ 74.43	$ 75.09
Breeding Stock Purchases	5.16	3.51	1.79	2.17	6.23
Equipment & Maintenance Operating	2.52	2.38	4.95	7.89	11.87
Building R & M	1.45	3.78	.40	2.17	1.33
Vet Medicine	1.53	2 71	2.32	2.45	2.97
Insurance	1.31	1.77	1.49	1.68	2.54
Utilities and Taxes	3.10	3.79	2.72	3.13	5.31
Marketing Costs	3.02	3.17	2.00	2.27	2.67
SHARP Premiums	.83	.96	-	1.43	4.47
Miscellaneous Costs			$ 2.26	3.66	4.14
Operating Interest	$ 1.30	$ 1.07	2.97	4.93	4.37
Total Cash Costs	$ 70.58	$ 79.42	$ 82.27	$106.21	$120.99
Non-Cash Costs					
Building & Equipment Depreciation	$ 6.08	$ 8.46	$ 3.85	$ 3.46	$ 6.38
Machinery Depreciation	2.62	2.41	3.58	3.70	5.96
Total Non-Cash Costs	$ 8.70	$ 10.87	$ 7.43	$ 7.16	$ 12.34
Total Cost of Production	$ 79.28	$ 90.29	$ 89.70	$113.37	$133.33
Net Farm Income	$ 37.71	$ 18.70	$ 13.24	$ 11.12	$ 27.76

Table 4.1
Investment and Income for Farrow to Finish Enterprise
Classified by Size and Profitability

	Farm With Above Average Net Farm Income	Farms With More Than 60 Sows	Farms With Less Than 60 Sows
Number of Farms	9	7	11
Number of Sows Per Farm	67	86	38
Number of Market Hogs Per Farm	841	952	411
Number of lbs. of Feed/Market Hog	735	781	909
	Per Market Hog	Per Market Hog	Per Market Hog
Investment			
Market Value of Buildings	$129.29	$ 106.37	$164.08
Market Value of Machinery	25.88	40.84	29.60
Market Value of Livestock	20.34	23.35	18.68
Total Investment	175.51	170.56	212.36
Income			
Boar Sales	$ 4.47	$ 2.40	$ 4.27
Sow Sales	12.30	10.95	9.19
Feeder & Weanling Hogs	10.06	6.38	20.09
Finished Hogs	133.01	137.54	123.92
SHARP Payment	5.40	5.32	6.91
Miscellaneous Income	1.29	1.71	.79
Inventory Change	-0.84	-7.67	4.18
Total Income	$ 165.69	$ 156.63	$169.33
Total Cash Income (Excluding Inventory Change)	$ 166.53	$ 164.30	$165.15
Total Cash Expense	$ 112.57	$ 120.85	$121.27
Net Cash Income	$ 53.96	$ 43.45	$ 43.88
Total Cost of Production (Including Depreciation)	$ 122.84	$ 133.08	$133.85
Net Farm Income	$ 42 85	$ 23.55	$ 35.48

Table 4.2
Expenses for Farrow to Finish Hog Enterprise
Classified by Size and Profitability

	Above Average Net Farm Income	Farms With More Than 60 Sows	Farms With Less Than 60 Sows
Number of Farms	9	7	11
Number of Sows Per Farm	67	86	38
Number of Market Hogs Per Farm	841	952	411
Number of lbs. of Feed/Market Hog	735	781	909
Cash Costs	Per Market Hog	Per Market Hog	Per Market Hog
Boar Purchases	$ 1.17	$ .73	$ 1.79
Sow Purchases	.39	1.20	2.60
Feeder Hog Purchases	4.46	4.66	1.19
Total Livestock Purchases	6.02	6.59	5.58
Home Grown Feed Grain	.09	-	5.29
Purchased Feed Grain	1.98	4.72	4.01
Complete Feed	57.73	62.15	57.78
Supplement	10.96	7.73	8.90
Total Feed Cost	70.76	74.60	75.98
Fuel and Lubricant	4.37	6.42	5.28
Machinery R & M	4.74	5.13	7.19
Total Machinery Cost	9.11	11.55	12.47
Vet and Medicine	3.36	3.18	2.58
Insurance	2.23	2.74	2.15
Utilities, Taxes & Rentals	4.73	5.07	5.95
Freight	1.71	1.85	2.11
SHARP Premiums	4.54	4.62	4.21
Marketing Cost	2.25	2.77	2.49
Building & Equipment R & M	1.23	1.44	1.14
Miscellaneous Costs	2.56	2.07	2.23
Total Other Cost	$ 22.61	$ 23.74	$ 22.86
Operating Interest (15%)	4.07	$ 4.37	4.38
Total Cash Expenses	$112.57	$120.85	$121.27
Net Cash Income	$ 53.96	$ 43.45	$ 43.88
Non Cash Costs			
Machinery Depreciation	$ 3.99	$ 6.64	$ 4.72
Building & Equipment Depreciation	6.28	5.59	7.86
Total Non Cash Costs	$ 10.27	$ 12.23	$ 12.58
Total Cost of Production	$122.84	$133.08	$133.85
Net Farm Income	$ 42.85	$ 23.55	$ 35.48

Table 5
Management Indicators for Farrow to Finish and Weanling Enterprises Classified by Enterprise and Profitability

	All Farrow to Finish Enterprises	All Weanling Enterprises	Above Average Net Farm Income*
Production	- $ -	- $ -	- $ -
Feed Grain/Market Hog or/Weanling	1.86	2.55	.09
Supplement/Market Hog or/Weanling	8.14	2.01	10.96
Complete Feed/Market Hog or/Weanling	60.62	17.90	57.73
Purchased Grain/Market Hog or/Weanling	4.47	1.08	1.98
Total Feed Cost/Market Hog or/Weanling	75.09	23.54	70.76
Total Feed Cost/Sow	814.72	303.43	888.20
Total Income/Market Hog or/Weanling	161.09	71.42	165.69
Total Cash Income/Sow	1,746.62	910.07	2,059.38
Total Cash Expenses/Market Hog or/Weanling	120.99	45.85	112.57
Total Cash Expense/Sow	1,311.96	584.90	1,399.12
Net Farm Income/Market Hog or/Weanling	27.76	19.47	42.85
Net Farm Income/Sow	300.77	248.09	532.56
Investment			
Buildings & Equipment Investment/Sow	1,391.10	461.91	1,622.82
Machinery Investment/Sow	404.88	325.68	327.22
Livestock Investment/Sow	242.32	210.99	255.35
Land Investment/ ow	7.20	5.92	4.84
Total Investment/Sow	2,045.52	1,004.50	2,210.23
Net Farm Income/Total Investment	13.6%	19.4%	24.0%
Cash Cost As a % of Total Income	75.1%	64.2%	67.9%

* Farrow to finish enterprises only.